CENTER FOR INDUSTRIAL IMAGING

CENTER

The Center for Industrial Imaging (CII) was established to commercialize image analysis, data analysis, and artificial intelligence technologies developed in the geosciences. Research at the University of Utah on fluid flow through porous media (i.e., aquifers, petroleum reservoirs) has resulted in generally useful image processing, image analysis, data analysis, and artificial intelligence techniques with commercial applications in geosciences and engineering.

TECHNOLOGY

CII technologies include Petrographic Image Analysis (PIA), which comprises four components: image acquisition, image processing, pattern recognition/data analysis, and linking to physical models. Each component involves specialized hardware, software, and expertise. The pattern recognition procedure within PIA has also proven useful in chemical fingerprinting in a variety of geoscience/environmental applications. CII has begun to explore areas outside geoscience applications, including the application of PIA to medical imaging, and especially to automated screening of prostate biopsies. CII also has been granted ownership of Integrated Paleontological System (IPS) software for further research, development, and commercialization. The Technical Alliance for Computational Stratigraphy (TACS), a consortium of eight petroleum companies, has been established to fund a three-year commercialization and development initiative.

ACCOMPLISHMENTS

The Technical Alliance for Computational Stratigraphy consortium of eight major petroleum companies, has been established to fund a three-year commercialization and development initiative to bring a commercial version of the PIA software to market. CII continues its partnership with the Energy and Geosciences Institute at the University of Utah to implement projects for the characterization of petroleum reservoirs and to demonstrate the utility of Center technology in commercial petroleum production settings. Collaboration continues with the University of Utah Department of Pathology to identify software modifications required to perform biological tissue analysis. The commercial goal is to market the licensed technology to medical pathology laboratories.

CONTACT

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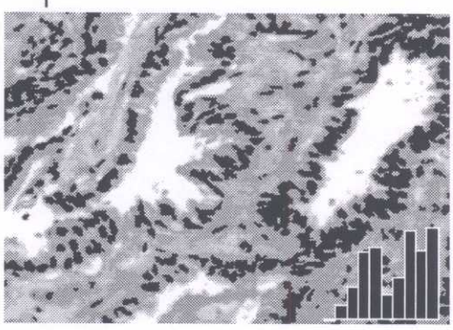
Can You Imagine...

. . . computational software that can automate the process of screening prostate biopsies and identifying suspected cancerous tissue using complex pattern recognition algorithms?

THE CENTER HAS DEVELOPED SOPHISTICATED SOFTWARE TO PROCESS DIGITAL IMAGES AND DO COMPLEX DATA ANALYSIS. COMMERCIAL APPLICATIONS INCLUDE BOTH GEOSCIENCE AND MEDICAL PRODUCTS.



■ Digitized image of prostate biopsy sample. Inset histogram represents dominant morphologic fingerprint present in this sample.